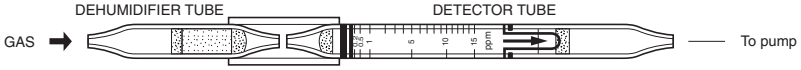
Tube No.
118SD

BENZENE



1. PERFORMANCE

1) Measuring range : 1-75 ppm 0.2-15 ppm 0.1-7.5 ppm
   Number of pump strokes 1(100mℓ) 5(500mℓ) 10(1000mℓ)
2) Sampling time : 10 minutes/5 pump strokes
3) Detectable limit : 0.02 ppm(1000mℓ)
4) Shelf life : 2 years
5) Operating temperature : 0～40℃
6) Temperature compensation : Necessary(See "TEMPERATURE CORRECTION TABLE")
7) Reading : Direct reading from the scale calibrated by 5 pump strokes
8) Colour change : White→Greenish brown

2. RELATIVE STANDARD DEVIATION

RSD-low : 10% RSD-mid. : 10% RSD-high : 10%

3. CHEMICAL REACTION

Iodine pentoxide is reduced.

$$C_6H_6 + I_2O_5 + H_2SO_4 \cdot nSO_3 \rightarrow I_2$$

4. CALIBRATION OF THE TUBE

DIFFUSION TUBE METHOD

5. INTERFERENCE AND CROSS SENSITIVITY

Substance	Interference	ppm	Coexistence
Toluene			Higher readings are given.
Xylene			〃
Carbon monoxide		2.0	Whole reagent is changed to Pale brown, unclear stain is produced and higher readings are given.
Hexane		2.0	〃

(NOTE)

In case of 1 or 10 pump strokes, following formula is available for the actual concentration.

$$\text{Actual concentration} = \text{Tmperature corrected value} \times \frac{5}{\text{Number of pump strokes}}$$

CORRECTION FOR AMBIENT CONDITIONS:

Temperature; In order to correct for temperature, multiply the tube reading with the following factors.

Temperature (℃)	0	1	2	3	4	5	6	7	8	9
Correction Factor	0.69	0.71	0.72	0.73	0.75	0.76	0.78	0.79	0.81	0.82
Temperature (℃)	10	11	12	13	14	15	16	17	18	19
Correction Factor	0.84	0.85	0.87	0.88	0.90	0.92	0.93	0.95	0.97	0.98
Temperature (℃)	20	21	22	23	24	25	26	27	28	29
Correction Factor	1.00	1.02	1.04	1.05	1.07	1.09	1.11	1.13	1.14	1.16
Temperature (℃)	30	31	32	33	34	35	36	37	38	39
Correction Factor	1.18	1.20	1.22	1.24	1.26	1.28	1.30	1.32	1.34	1.36
Temperature (℃)	40									
Correction Factor	1.39									